

ABSTRACT

A method is provided for producing hyperbranched polymers comprising heating a polymerizable reaction charge comprising (a) a monomer mixture comprising 50-99.1% by weight of at least one monoethylenically unsaturated monomer and 0.1-50% by weight of one or more multiethylenically unsaturated monomers and (b) if at least one ethylenically unsaturated monomer of the monomer mixture is not a thermally initiating monomer, a free radical polymerization initiator, to a temperature in the range from about 250°C to about 400°C in a continuous reactor which allows mixing of the reactor contents for a residence time of from about 2 minutes to about 60 minutes, provided that if the total amount of multiethylenically unsaturated monomer is less than 3% by weight of the monomer mixture than at least one of said one or more multiethylenically unsaturated monomers must be tri- or greater ethylenically unsaturated. The hyperbranched polymers prepared by this process are also described.